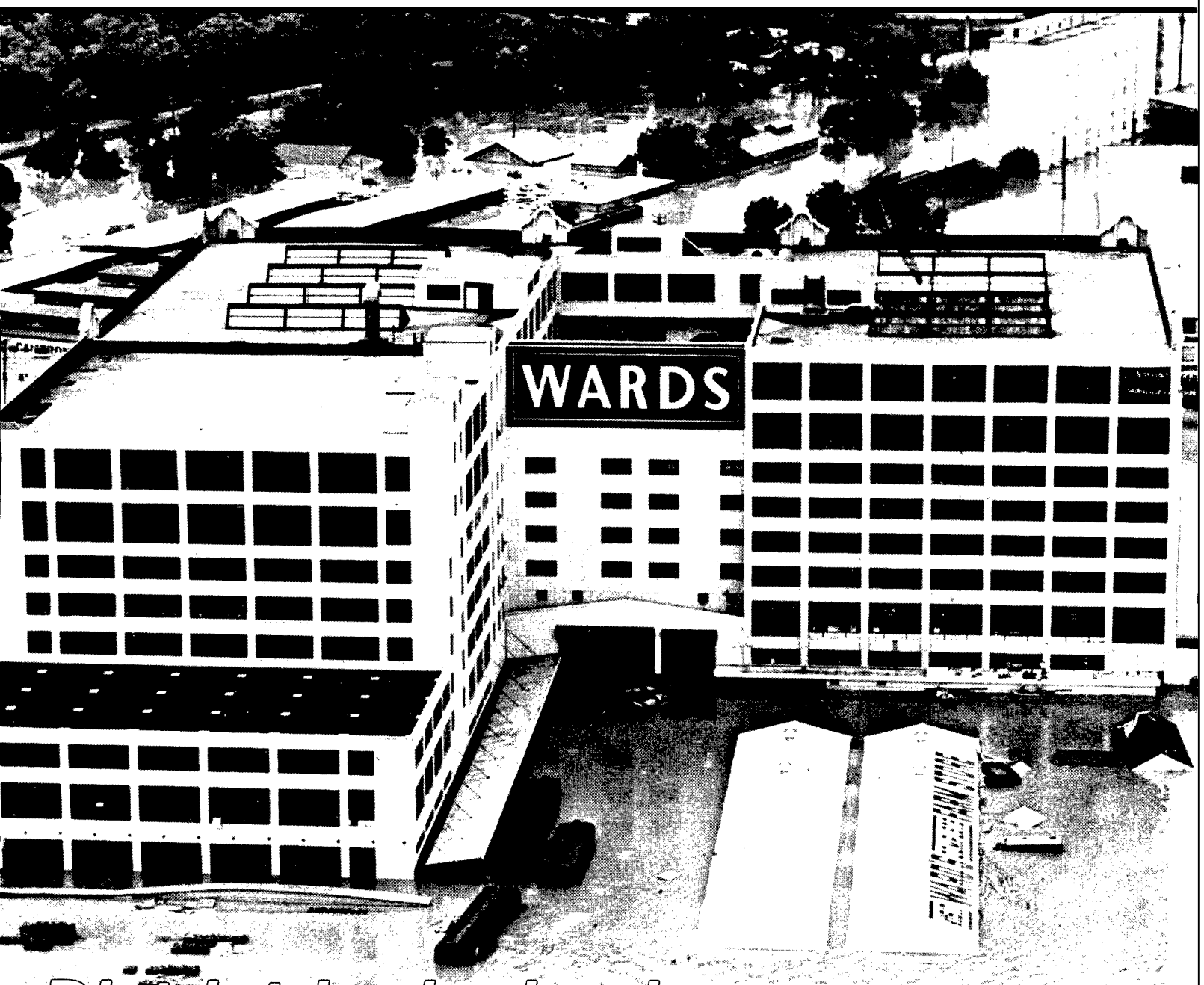
40 YEARS 1950-1990
US Army Corps of Engineers
Fort Worth District

Dispatch

January 1990 Vol. 8 No. 1



District looks back on 40 years of service

(See story on page 8)

Dispatch

January 1990 Vol. 8 No. 1

District Engineer
Col. William D. Brown

Public Affairs Officer
Sally A. Werst

Editor
Nita Mallett

Staff Writer
Martina Wagner

Photographer
Carl Thorp

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Address mail to:
U.S. Army Engineer District, Fort Worth
Public Affairs Office
Attn.: Editor, DISPATCH
P.O. Box 17300
Fort Worth, Texas 76102-0300
(817) 334-3395

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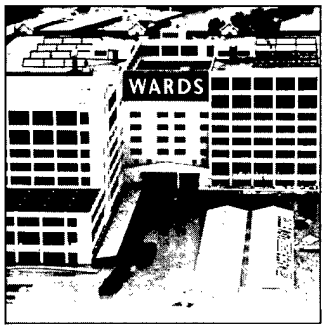

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The Fort Worth District looks back to what brought us here— the flood of 1949

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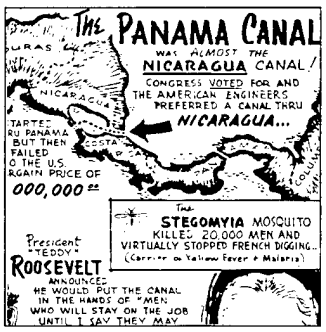

History

Did you know... the Corps was responsible for completing the Panama Canal?

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Clovis Indian culture discovered at Ray Roberts Lake

by Nita Mallett

It was a little more than a year ago when Dr. Reid Ferring, a contract archaeologist for the district, walked along the outlet channel of Ray Roberts Lake and discovered what has been called the most significant archaeological find in the Southern Plains.

More than 9,000 artifacts, dating back 11,000 years ago, have been recovered from the Clovis Indian culture. Although there are no human remains, tools spear points, knives and animal bone have been found. Named the Aubrey Clovis site, it is considered undisputable evidence of the first Texans.

According to Ferring, who is an associate professor of archaeology and geology at the University of North

(Continued on next page)

Photo by Carl Thorp

Carl Thorp

A new 1m X 1m excavation unit at the main camp is being layed out, which will be transported to waterscreening.

(Continued from page 3)

Texas, the Aubrey site is only the third Clovis camp west of the Mississippi. One of the other two sites is totally eroded.

The Clovis culture, named for the first archaeological site discovered near Clovis, N.M. in 1932, are the first of the American Indian cultures in North America. Clovis tools are the oldest artifacts ever found in the New World. Their distinctive spear points, fluted at the base for fitting into spear shafts, reveal the craftsmanship of North America's most accomplished flint-knappers.

Approximately 200 square meters have been excavated at the Aubrey site since the district provided emergency funding for testing in December 1988. The first square-meter test pit netted 1,700 artifacts alone.

"We came right down on a place where a guy had sat 11,000 years ago and made a spear point," said Ferring. "But I think we're only seeing a small part of the picture. Bore holes have been dug north and south of this area so we know how far this site extends, but we don't know what archaeology is there. It could be a Clovis Fox & Jacobs."

The site was discovered while Ferring was working for the Corps as an archaeological contractor during the construction of Ray Roberts Lake, located near Denton. He had taken his son to the outlet channel of the lake to look for fossils for a school project.

Walking further downstream, Ferring noticed the change in geology and knew it indicated the Late Pleistocene period of the last ice age era. He walked back along the basin of the channel and found pond deposits, bison bones and snails. He had seen these sort of things at other Paleo-Indian sites and knew he was on to something.

After a call to Jay Newman, district archaeologist, it was within a week that Ferring, Newman and Karen Scott, chief of the Cultural Resources Section in Planning, found flakes and a Clovis spear point.

Because the site is 25 feet or more below the surface, it would have been almost impossible to even know the site was there if it weren't for the sloped trench created by the Corps to release water from Ray Roberts into the Elm Fork of the Trinity River.

"Just the phenomenal fortune, not only of how the site was exposed, but that one trench exposed all this critical geography, two camps and other archaeological activities in just one swoop—it's just phenomenal," said Ferring.

The second camp was actually discovered months later. During the May-June floods of 1989, Ferring walked along the channel after each rain. After finding about 10 chips, a test pit was put in and it became B Camp, located 400 feet east of the first one.

"The value of this is not just to tell us how the landscape looked like 15,000 years ago, but give us a background of what could have happened to the big animals, like the

Carl Thorp

Washed material from excavation is dried at the waterscreening station. Stone flakes are then sorted from the natural residue.

Carl Thorp

Dr. Reid Ferring shows some of the larger artifacts found at the Aubrey site, including spear points and scrapers, to the media.

mammoth and mastodon, all of which became extinct right after Clovis people came," said Ferring. "The debate is whether they died off naturally or were hunted off. I think it was a little of both."

And questions remain about the sociology of Clovis people. Because the sites are rare, it is difficult to determine how they arrived, if they traveled in multiple families, what hunting strategies they used, etc. The Aubrey site will help the Paleo-Indian archaeologists draw more accurate conclusions.

To assist the archaeologists, the Ray Roberts Project Office staff kept a watchful eye out for vandals and, because of their efforts, not one item was stolen. The district office also helped by keeping the media at bay for almost a year. But on Nov. 30, a much-awaited media day was held with every major newspaper, television and radio station covering the event.

Earlier in the month, National Geographic sent a photographer to the site for an article planned for 1992.

By Dec. 15, work at the site was complete and the area has already been backfilled to protect it against future impacts. Reseeding will take place in the spring.

The success of this project is largely due to the district's responsiveness and the Corps' Cultural Resources Management Program.

"This is a prime example of cooperative government archaeology where the contractor and the Corps worked together to handle a fast-track project," said Newman.

"Just the phenomenal fortune, not only of how the site was exposed, but that one trench exposed all this critical geography, two camps and the other archaeological activities in just one swoop—it's just phenomenal."

Reid Ferring, archaeologist
University of North Texas

Ferring and his staff at the University of North Texas are analyzing the artifacts and will be writing a technical and popular report of their findings.

"Funny I never came down here before," said Ferring, referring to the outlet channel. "But I'm convinced that during and after construction of the lake, no one would have ever found this. What it took was a couple of years of periodic releases to clean up the slopes so we could see it."■

Volunteers make the difference

Somerville Lake hosts handicapped deer hunt

Somerville's Assistant Manager and hunt
foreground, gives a safety briefing to the h

by Smokey Cranfill, Somerville Lake

There's something special at Somerville Lake that happens only once a year. It even comes along in December, although it has nothing to do with Santa Claus. But it, too, has to do with the spirit of giving.

Somerville is the only project in the Fort Worth District to sponsor an annual handicapped deer hunt. In 1989, its second year, the event was a big success with 27 paraplegics and quadriplegics vying for the 10 spaces.

Lake Manager Martin Gustafson says it's his staff's way of giving something back to the community and helping those who might have never had the opportunity to hunt.

"Our basic massion, besides the operations and maintenance of the lake, is to provide recreational opportunities for the community and sometimes we forget about the disabled who cannot participate in many of these activities," said Gustafson. "At Somerville, we want to reach all segments of the society and provide these opportunities to everyone."

But it takes more than the Corps to pull off an event like this. The Somerville Lions and Rotary Clubs sponsor the hunt along with help from the Boy Scouts and numerous individual volunteers.

Smokey Cranfill, Somerville's assistant manager, is in charge of coordinating the event, which begins many months beforehand. For instance, volunteers need to be recruited and arrangements for food, camping equipment, radios, signs, safety apparel and vehicles need to be made. The Texas Parks and Wildlife Department assists with the deer population census, advise on blind locations and provide blind materials.

The locations of the deer blinds and feeders are carefully selected and then feeders are continually filled and watched. This is the first time to have hunting on one of the reservoir's islands, too.

Many of the blinds are constructed by Boy Scouts, along with volunteers and the lake staff. Two have been enclosed by civic club members so the blinds may be heated and provide soundproofing for the hunters to move around in their wheelchairs without being heard by the game.

A safety orientation meeting is held shortly after the hunters arrive and all rifles are sighted in. That evening, the hunters, guides, volunteers and lake staff are treated to a meal at the First Baptist Church of Lyons.

The next day, hunters are in their blinds by 4 a.m. Each hunter is assisted by two volunteers who act as guides, transporters and also help aim and position the hunter's rifle. Guides are in constant touch with each other and the main camp by use of radios to ensure a safe hunt and report any activity.

Of the nine hunters, two left on unexpected emergencies, only one went home empty-handed. A total of five bucks, two 8-points, a 6-, 5-, and 4-point, and one doe had been bagged.

Designed after a similar hunt at Rend

Courtesy Somerville Project Office

coordinator Smokey Cranfill,
nters.

Courtesy Somerville Project Office

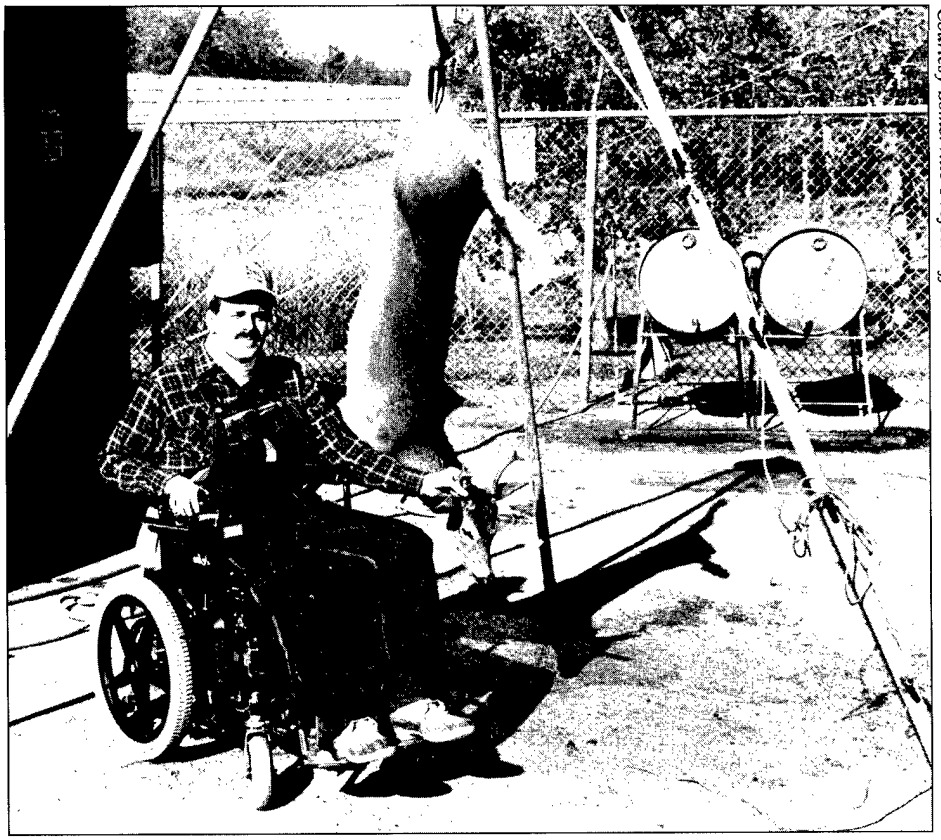
Brad Meyer performs his range firing with Jeff Shoppe, range master and volunteer coordinator.

Lake, a Corps project in Benton, Ill., the staff at Somerville and six participants experimented with the program in 1988. The hunt was so well received that it was decided to hold the event annually.

Gustafson is also looking to provide other opportunities for the disabled—perhaps a fishing event if enough volunteers can be found. If the hunt is any indication of recruiting helpers—they had more than 80—a tournament could be a real possibility.

Cranfill concurred that the event would never be as successful without community involvement.

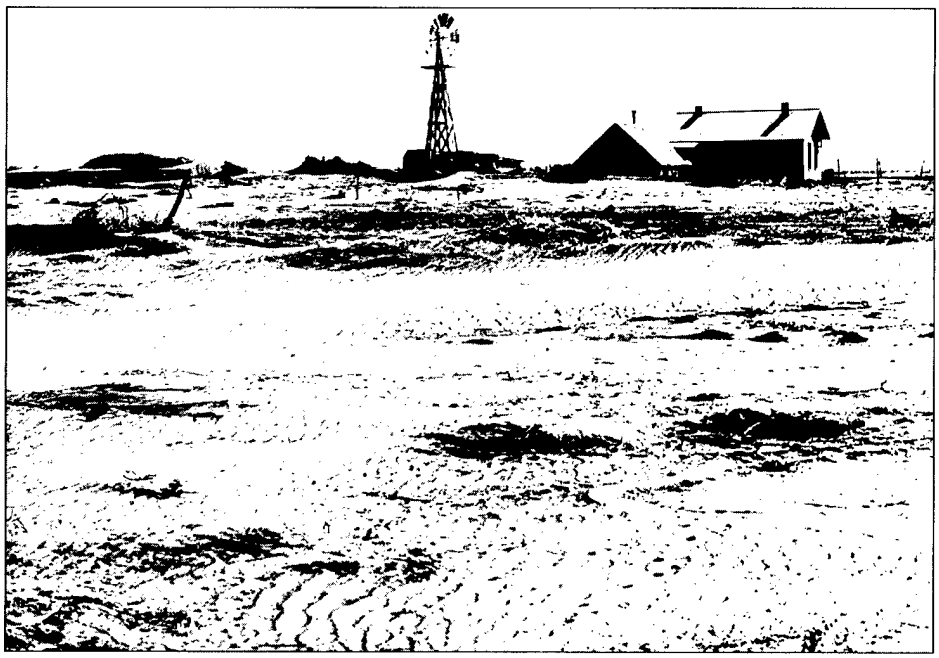
"This deer hunt is a testament to the Corps' volunteer program at Somerville," said Cranfill. "We have a strong and viable program that is the core of our public involvement process in this area. People *do* make the difference and we are proud to be the host of such a worthwhile endeavor."■



Courtesy Somerville Project Office

Michael Douglas got the first kill of the hunt with a 4-point buck.

Fort Worth District...
40 and foreward



Courtesy of U.S. Soil Conservation Service

Effects of drought on Texas farmland.

by Judy Marsicano

Nineteen-ninety marks the 40th anniversary of the Fort Worth District, U.S. Army Corps of Engineers. The district, established in April 1950, a year after flooding devastated the Fort Worth-Dallas area, has played an impressive role in the development of the Southwest.

Texas suffered severe water shortages since the early 1800s which threatened the very lifeblood of its existence—agriculture—and stifled its growth and prosperity.

And the state's geography has been cursed throughout history, with its rain forests in the east and desert plains in the west, causing frequent flooding on one extreme to periods of drought on another.

As the new district was being established, Texas was at the threshold of one of its worst droughts which was to last for three years. While prolonged drought caused significant loss of livestock and crops, the effects of flooding in loss of life and property were dreaded even more.

But as soon as the trauma of the floods had subsided and the land resumed its natural arid character, Texans returned to their longing to develop the frontier. Their desperate quest for water remained a pressing issue.

Normal precipitation just wasn't enough and periods of below-average rainfall added to the shortage. Future demands of a growing population were sure to take a toll on existing reservoirs in larger cities, and underground wells and springs in the surrounding smaller towns.

"Everywhere men and women began to look closely at their own communities," read the President's Water Resources Policy Commision in 1950, "and laid special emphasis...on the potential values of water development and river control when related to land and industrial use."

But relief was on the way. During World War II, Congress approved construction of several major reservoirs in North Texas under the Galveston District to include Benbrook, Lewisville, Grapevine, Lavon and Whitney. The primary purpose of these projects was flood control. To lighten Galveston's already heavy workload, the Fort Worth District was formed and has since constructed 24 major water resources projects (with one more under construction), and many local flood control projects, including the Fort Worth and Dallas Floodways, and the San Antonio Channel Improvement and Tunnels Project. These projects have prevented millions of dollars in flood damages.

After the war ended, the Fort Worth District was given the responsibility for military construction not only in Texas, but also in Louisiana, Arkansas, Oklahoma and New Mexico. Some of the military and "work for others" construction efforts in the past four decades include the construction of the Johnson Spacecraft Center in Houston for NASA, the Aerospace School of Medicine for the Air Force in San Antonio, support facilities for the B1 bomber, C-5A and AH-64 aircraft at Dyess and Kelly Air Force Bases and Fort Hood, the remodeling and enlargement of Wilford Hall Medical Center at Lackland AFB in San Antonio, and the Sergeants Major Academy at Fort Bliss.

As the water supply problems diminished and the economy flourished, citizens of the Lone Star State funneled their energies to other arenas—protecting the environment, impounding rivers and changing the environment to enhance continued growth and development.■

Future articles in the *Dispatch* will focus on other missions and accomplishments of the Fort Worth District.

National Engineers Week celebrated

by Mike Burton, Construction Division

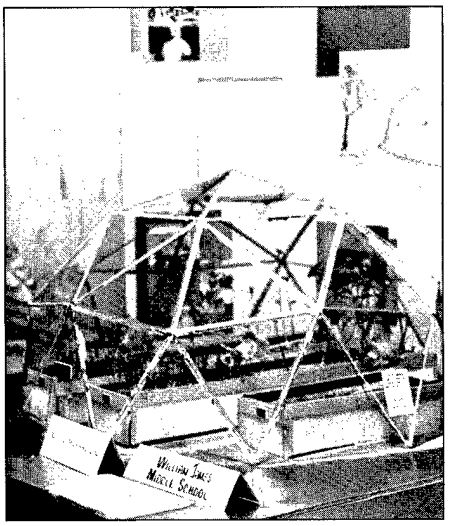
"Engineers: Turning Ideas into Reality in Construction," will be the theme of the 1990 National Engineers Week to be observed Feb. 20-23 in the Fritz G. Lanham Federal Building.

Highlighting the event will be an engineering model contest sponsored by the Texas Alliance of Minorities in Engineering. Area middle and high school students will compete in various categories as they develop models around the theme, "The Future of Engineering." This competition is designed to teach participants valuable engineering concepts as they relate to the planning, scheduling, design and construction of projects. Awards will be presented during a reception on Feb. 20 at 2 p.m. in the Training Room, 1A03.

Throughout the week, Fort Worth District engineers will speak at area schools and students will visit Corps offices to gain first-hand look at the daily work of engineers.

In addition, a cash incentive award will be given to the individual who best represents the spirit of participation at the annual event.

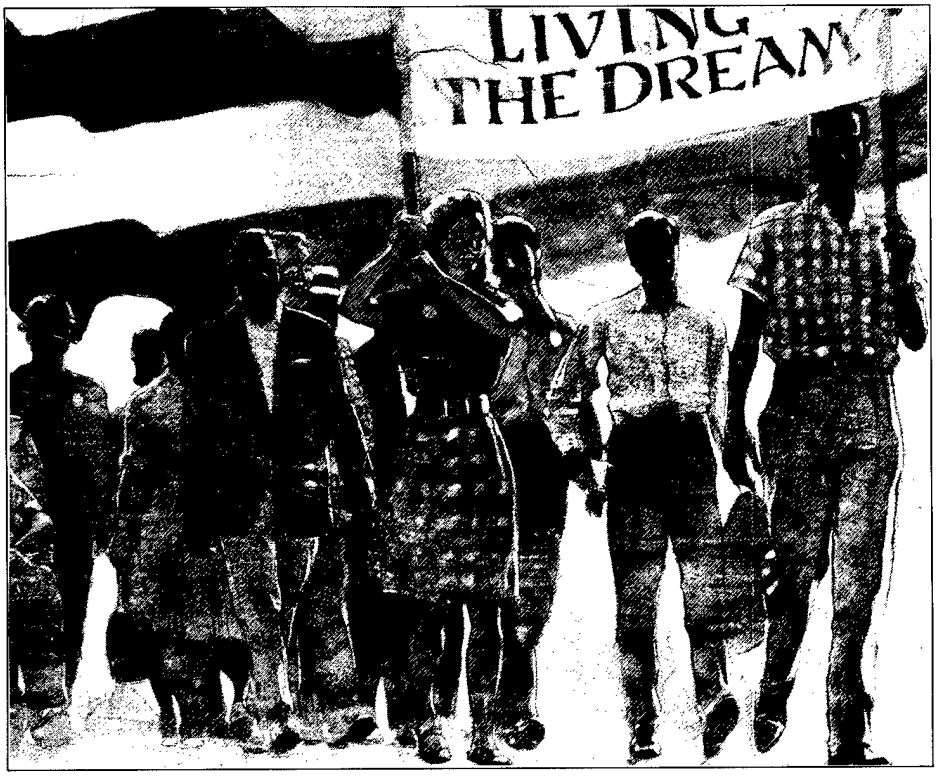
The NEW committee is looking for volunteers to be guest speakers and tour guides. For more information, call Warren Arthur at 334-3870.■



Carl Thorp

Models such as this will be on display in the lobby of the federal building.

Black history honored in February



The Black Employment Committees of the district and the General Services Administration join forces in February to celebrate Black History Month.

The Assistant Superintendent of the Fort Worth Independent School District, Dr. Morris Holmes, will speak on "Educational Issues in Tarrant County," Feb. 8 at 10 a.m. and 11 a.m. in Room 1A03 in the federal building, followed at noon by music from the City of Fort Worth's Employee Gospel Choir in the lobby. The 7th floor cafeteria will also be serving ethnic food during lunch the same day. Artist Clarence Davis will have his work on display Feb. 9 from 11:30 a.m. to 1:30 p.m. also in the lobby.

Join your fellow workers in honoring the accomplishments of African Americans and celebrating the national theme, "The Father of Black History—Carter G. Woodson, A Living Legacy."■

Corps completes major navigation project

Throughout the history of the Army Corps of Engineers private institutions and all levels of government have borrowed personnel and engineering knowledge from the Corps to complete difficult construction projects.

One well-known case was the Panama Canal. From the very beginning, the canal project was an overwhelming challenge to the engineers of the world.

French engineers, under the guidance of Ferdinand de Lesseps (who successfully completed the Suez Canal in 1869), began the excavation of a sea-level canal at the isthmus of Panama in 1880.

Victimized by tropical diseases, financial difficulties, landslides along the problematic Culebra Cut and the wrong engineering design, the French gave up after six years. Nearly 20,000 lives had been lost, mainly from malaria and yellow fever.

The successor to the French effort, the New French Panama Canal Company, also failed and sold its assets to the United States for $40 million.

On May 4, 1904, the American effort began when 2nd Lt. Mark Brooke, of the Corps of Engineers, signed the document of transfer for President Theodore Roosevelt.

The construction of the canal required the organizational and engineering skills of the best American civilian and military engineers of that time. John Wallace, the first civilian chief engineer on the project, failed in spite of his railroad and operations expertise.

His successor, John Stevens, the foremost railroad construction man in the United States, took over in 1905 and established the basic plan for the canal. But as a railroad engineer, he lacked experience in the large-scale use of concrete and a knowledge of hydraulics, in which Army engineers specialize.

New concepts included a lock-and-lake canal to replace a sea-level one and a total effort to conquer diseases, especially the deadly yellow fever. Col. William Gorgas was the medical hero of the successful fight against insect-borne tropical diseases.

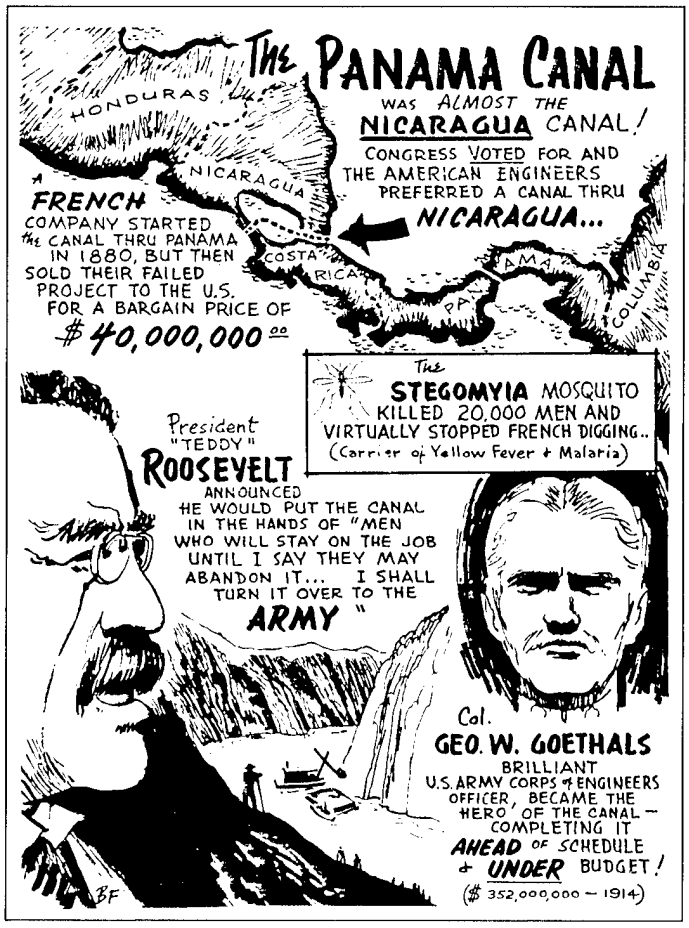
Stevens resigned in 1907, no longer willing to shoulder the man-killing responsibilities and the media's criticism of his work.

President Roosevelt then made West Point graduate Col. George Washington Goethals, a model officer with a brilliant career in the Corps, to wield supreme authority.

The success of the American efforts compared to the French work was from the application of modern science and technological advances, the design of a lock-type canal, and the use of electric power.

The most difficult engineering problem confronting the civil engineers was excavating the canal, particularly with the science of soil mechanics in its beginning stages. Faced with an unstable terrain prone to seepage and landslides, the engineers had to remove an amount of earth double the original estimate.

Although the canal opened before scheduled, the engineers found no permanent solution to the problem of landslides.



However, those responsible for the maintenance of the canal found the proper slope for the difficult banks of the Culebra Cut—after 20 years of experimenting.

At that time, the cost of the canal, in money and lives lost, proved greater than any single construction effort in American history. The cost was $352 million, or a total of $639 million if the French effort is included. More than 5,600 people lost their lives to disease or accidents during the American effort alone.

But the cost was forgotten on Aug. 15, 1914, when the 51-mile canal opened with a big celebration—ahead of schedule and under budget.

Historian David McCullough called it "a masterpiece of design and construction" due largely to Corps engineer "George Goethals, whose ability, courage and tenacity were of the highest order.

"The creation of a water passage across Panama was one of the supreme human achievements of all time."■

By Dr. Anthony Turhollow, Los Angeles District
Artwork by Bill Fleming, LAD

Update

Our deepest sympathy to **Elaine Ashford**, secretary for the Value Engineering Office, on the death of her husband, **Monte**, in December. Monte worked as a civil engineering technician in the Economics Branch of Planning Division and had 28 years of service. He is missed.

Farewell to **Rusty** and **Kathy Lundy** who transferred to the Philadelphia District Jan. 19. Rusty was chief of the Budget Branch in the Resource Management Office and is now the chief of RMO in Philadelphia. His wife, Kathy, was a clerk-typist in the Management Analysis Branch of RMO. Best wishes and good luck.

Doug Perrin, chief of the Upper River Basins Unit of the Reservoir Control Section, gave a presentation last month to the American Society of Civil Engineers on the Corps' regulation activities during the May-June floods.

Congratulations to **Sheila Arvizu**, a clerk-typist at the Lavon Lake Project Office, who was named the Office Education Student of the Week in the "Wylie News" in December.

Skipper Scott, archaeologist in the Permits Section of Operations, spoke to 600 students at Marcus High School on regional archaeology and the Clovis site at Ray Roberts Lake Dec. 15.

Proctor Lake Park Ranger **Richard Booker** and student aide **Sallie Walker** recently presented a program for Boy Scouts, Troop 15, helping them earn life-saving and swimming merit badges.

Happy retirement to **Monna Schubert**, a program analyst officer in the Planning and Control Branch of Real Estate, who retired from the Corps Dec. 31 with almost 16 years of service.

Congratulations to **Mike Danella**, an engineer in the Hydrology and Hydraulics Branch, on earning his professional registration.

Our deepest sympathy to **Ralph Taylor**, who retired from the Engineering Division in 1980, on the death of his wife, Lorene, Nov. 27. Those wishing to send their condolences may write to Ralph at 5105 Kessler Road, Fort Worth, 76114.

"Attaboy" to **Larry Bogue**, Joe Pool Lake manager, on his article, "Hypothermia, know what to do if you find yourself overboard," published in the January edition of "Joe Pool Lake Express News."

Congratulations to **Don Clements** who has been selected as the project manager for Cooper Lake. Prior to this, Clements was the project manager at the Town Bluff Hydropower Project and worked at the Red River Resident Office for six weeks before heading to Cooper.

Our deepest sympathy to the family and friends of **Chuck Campbell**, a supply clerk in the Logistics Office, who died Jan. 21. Campbell had been hospitalized for several weeks at Carswell AFB Hospital due to emphysema.

Best wishes to **John Lee**, former Manpower Management Officer in RMO, who is now the chief of Audit with the Lower Mississippi Valley Division in Vicksburg, Miss.

Canyon Lake personnel participated in the 10th Annual Canyon Lake Christmas Parade Dec. 9 with a project boat used as a parade float. Accompanying the staff were "Woodsy the Owl" and "Smokey the Bear." Park Rangers **Judd McNett** and **Gary Cordova**, along with Woodsy and Smokey, spoke to 208 students from Mountain Valley Elementary School Dec. 12 and to 155 students from Comal Elementary the following day. Topics included fire safety, pollution and water safety.

Welcome back to **Anna Richards** who has returned to work in the Logistics Office after back surgery.

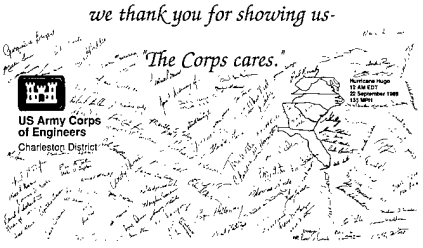
Evelyn Ruland, former Cooperative Support Service Unit chief, is RMO's new Manpower Management Officer. **Paul Marsicano**, management analyst, is the new CASU chief.

Congratulations to **Glenn White**, a mechanical engineering technician in the Engineering Division, and his wife, Peggy, on the birth of their second child, Jennifer Lee, born Jan. 3 weighing nine pounds, three and a half ounces.

Our deepest sympathy to the family and friends of **Olga Russell** who died Jan. 17. Russell was a retiree from the district's Finance and Accounting Branch. She died at the age of 92.

Congratulations to **Beverly Hutcherson's** daughter, Mitzi, who received a National Science Merit Award for her academic excellence and work in science. Mitzi attends Calvary Academy in Fort Worth where she is an eighth grader. Beverly works in the Construction Division as an architecture technician.

The Charleston District is extremely grateful for the assistance rendered by the members of the Corps Family. Your support was instrumental in overcoming the adversities associated with hurricane Hugo. As we restore our District to order, we thank you for showing us-



District News

Christmas project another success

The "Corps Cares at Christmas" project was again a success as the gifts you gave reached 102 children who might not have had a Christmas. The Equal Employment Opportunity Office and the Special Emphasis Council thanks everyone for their presents, donations and cookies that were distributed at the Christmas party Dec. 20 in the 7th floor cafeteria. A special thanks to Santa Jim Vandersand, chief of Engineering's Design Branch, and to Alan Steinecke, committee chairperson.

Escort service to parking garage

The Law Enforcement Branch has begun a trial escort service to the Federal Parking Garage for employees who work late. The service will run through Feb. 28. So if you work late, play it safe and call the federal police at 334-2888.

Food Bank thanks the Corps

The Food Bank of Greater Tarrant County thanks everyone at the Corps for the 300 pounds of food collected during the holiday canned food drive. The goal of 400,000 pounds was surpassed and the 1989 drive is once again a success.

1,000 accident-free days marked by contractor

Fluor Constructors International, the Corps' contractor for the Ground-Based Free Electron Laser - Technology Integration Experiment at White Sands Missile Range, N.M., set a record Nov. 30 by attaining 1,000 accident-free days on the site. The contractor was honored at a ceremony, held Dec. 7, where GBL Project Manager Col. Nicholas Barron commended the contractor saying, "This milestone is a tribute to their entire management team."

Door decorating contest

Thanks to all who participated in the Recreation Association's Third Annual Holiday Door Decorating Contest. Of the 11 entries, Office of Counsel placed first for its rendition of "Who's Naughty and Who's Nice," with Santa as the judge and the office as the jury. Second place went to Personnel's Training and Development Branch for its gingerbread house and IMO's Information Integration and Implementation Branch took third for its gingerbread house. An honorable mention was given to Real Estate's Appraisal Branch for "An Upside Down Christmas." Congratulations to all.

Design and Environmental awards named

WASHINGTON, D.C.—The Corps has named the winners of its 1989 Chief of Engineers Design and Environmental Awards competition. The awards recognize excellence in the design of, or environmental achievement related to, recently completed projects developed by the Corps and their professional design contract firms.

Entries from Corps' field operating activities were judged by panels of experts in the fields of engineering, architecture, landscape architecture, and the environment.

Of the 12 submissions from the Southwestern Division, the Fort Worth District received four honors and the Tulsa District picked up one.

In the Engineering category, the district won an honorable mention with its Kelly Air Force Base Industrial Waste Treatment Upgrade Facility. The design firm was Albert H. Halff Associates. Tulsa's entry of the Blade Repair Facility at Tinker AFB also won an honorable mention.

The Environmental category yielded two awards. An Award of Merit was the second recognition received for the Waste Treatment Facility at Kelly AFB and an honorable mention was given to the Dual Fuel Steam Plant at the Red River Army Depot. Pope Engineers, Weyher/Livsey Constructors were the contract firms.

The Sergeants Major Academy at Fort Bliss won an honorable mention in the Landscape Architecture category. The design firms were Fouts Gomez Architects, Inc., AIA, and Lewis and Associates.

Test your memory answers

Check your answers from last month's numbers game with the list below. Good luck.

1. 26 = Letters in the Alphabet
2. 1001 = Arabian Nights
3. 7 = Wonders of the World
4. 12 = Signs of the Zodiac
5. 54 = Cards in a Deck (with the Jokers)
6. 9 = Planets in the Solar System
7. 88 = Keys on a Piano
8. 13 = Stripes on an American Flag
9. 32 = Degrees Fahrenheit at which Water Freezes
10. 18 = Holes on a Golf Course
11. 90 = Degrees in a Right Angle
12. 200 = Dollars for Passing Go in Monopoly
13. 8 = Sides on a Stop Sign
14. 3 = Blind Mice (See How They Run)
15. 4 = Quarts in a Gallon
16. 24 = Hours in a Day
17. 5 = Digits in a Zip Code
18. 11 = Players on a Football Team
19. 1000 = Words that a Picture is Worth
20. 29 = Days in February in a Leap Year